Exemption No. 7799

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RENTON, WASHINGTON 98055-4056

In the matter of the petition of

Airbus

for an exemption from §§ 25.785(d), 25.813(b), 25.857(e), and 25.1447(c) of Title 14, Code of Federal Regulations

Regulatory Docket No. FAA-2002-12276

GRANT OF EXEMPTION

By letter EAW 414.0215/02, dated April 10, 2002, Wolfgang Didszuhn, Vice President, Product Integrity, Airbus, 1 Rond-Point Maurice Bellonte, 31707 Blagnac Cedex, France, petitioned for an exemption from the cargo-only provisions of § 25.857(e), and the passenger requirements of §§ 25.785(d), 25.813(b) and 25.1447(c) for the Model A300C4-605R Variant F airplane, to allow carriage of six non-crewmembers (commonly referred to as supernumeraries.)

Sections of the Federal Aviation Regulations (FAR) affected:

Section 25.785(d) at Amendment 25-32 requires that there be a firm handhold to enable occupants to steady themselves when moving through the aisles in moderately rough air.

Section 25.813(b) at Amendment 25-32 requires that each floor level exit requiring crewmember assistance have enough space next to the exit to allow a crewmember to assist in the evacuation of passengers without reducing the unobstructed width of the passageway below that required for the exit.

Section 25.857(e) at Amendment 25-32 requires that when a class E cargo compartment is installed on the airplane, the airplane is used for carriage of cargo only.

Section 25.1447(c) at Amendment 25-41 requires that there be ten percent more oxygen masks than occupants and that there be two oxygen masks in each lavatory.

Related sections of the FAR:

Section 121.583(a) contains a listing of categories of the people who may be carried aboard an airplane in part 121 service without complying with all the passenger-carrying airplane requirements of part 121.

Petitioner's supportive information:

Airbus's petition statements are summarized as follows:

Description of the airplane

The A300C4-605 Variant F is a pressurized transport category airplane powered by two turbofan engines. It will be included on the US Type Certificate Number A35EU, first issued on May 30, 1974. The A300C4-605R Variant F is an all-freighter airplane, having an all-cargo main deck configuration, the same as the A300F4-605R airplane. In order to optimize cargo missions, accommodation for 6 persons is provided between the flight deck and the main deck class E cargo compartment. The courier area arrangement is identical to that of the A300F4-605R airplane. Except for the sections for which exemption is requested, all design criteria applicable to the carriage of passengers have been taken into account for the design of the seating arrangement. The 9g crash net, emergency exit configuration (2 type A doors and escape slides), oxygen supply, and associated instructions and warnings are identical to those on the A300F4-605R airplane. The crew-courier two-way communication system is identical to that on the A300F4-605R airplane.

Airplane flight manual (AFM) limitations defining the conditions under which supernumerary persons can be carried will be identical to those for the A300F4-605R airplane.

Equivalent Level of Safety

Airbus considers that an equivalent level of safety to the parts of the requirements from which relief is sought is achieved by design precautions and by the introduction of AFM instructions for the A300C4-605R Variant F airplane that are identical to those for the A300F4-605R airplane.

The oxygen supply and associated instructions and warnings are identical to those for the A300F4-605R airplane. Oxygen supply in case of depressurization (as required in case of smoke warning in the main deck cargo compartment) is ensured by fixed oxygen bottles, which can supply oxygen for all the airplane occupants for the maximum possible duration. When oxygen masks need to be used, occupants are notified by a chime and by lighted signs located within view. These signs can be either manually activated by the flight crewmembers or automatically turned on by an altitude pressure switch. The front of the mask box is fitted with two half doors,

one of which is activated by the removal of the mask from its housing and initiates automatic opening of a miniature oxygen valve.

The crew-courier two-way communication system is identical to that for the A300F4-605R airplane. Two-way communication with the cockpit is possible through dedicated communication panels. Other emergency equipment, as required by the applicable Airworthiness Standards, is also provided. Airbus believes that an equivalent level of safety to the parts of the requirements from which relief is sought will be achieved by design precautions and by defining in the A300C4-605R Variant F AFM Limitations section the conditions under which supernumerary persons may be carried .

Extent of the Requested Regulatory Relief

The main purpose of this request for exemption is the same as was requested for the A300F4-605R: to permit carriage of noncrewmembers on an all-freighter airplane. This is the reason for requesting exemption from section 25.857(e). Other sections from which exemption is sought are secondary to this one. Exemption from the aforesaid sections is sought to the following extent:

Section 25.785(d): No handgrip is installed.

Section 25.813(b): Assist space is not provided next to the emergency exits. The assist space is adequately respected on one side in cases where the cargo load has not shifted forward under crash landing conditions.

Section 25.857(e): Relief is sought to permit carriage of six persons on an all-freighter airplane, which has a class E cargo compartment.

Section 25.1447(c)(1): One oxygen-dispensing unit is supplied and readily available for every seated occupant. The occupants will take hold of the mask upon instruction via lighted signs and chime controlled by the flightcrew.

Section 25.1447(c)(3)(ii): One oxygen mask is stored in the lavatory. It can be connected to the fixed oxygen distribution system.

Supporting Arguments

Cargo operators need a number of support personnel for safe loading and offloading of cargo. Such personnel are obviously needed both at departure and destination of a cargo flight. It is particularly important that the cargo handlers are present upon airplane arrival if perishable goods or live animals are carried. The most efficient, surest, and cheapest way to assure their attendance at the destination airport is to transport them aboard the cargo flight.

Cargo operators may have to carry cargo such as live animals, hazardous materials, or valuable or perishable goods, that cannot be left unattended, even for the duration of a flight, and the presence of personnel qualified in their handling is necessary on the airplane on which they are carried. Safety and efficiency of the operation will therefore be enhanced.

Cargo operators also need to have qualified personnel for operations and maintenance purposes at various locations. They will optimize their missions if they are permitted to carry their personnel aboard their cargo flights, thus saving travel on regular passenger flights.

The Airworthiness Standards applicable to the type certification of the Airbus A300C4-605R Variant F, as well as the current Airworthiness Standards, do consider carriage aboard commercial flights of crewmembers, including flight crewmembers and cabin attendants, who are assigned duties associated with the operation of the airplane, and passengers who have no expected ability in the use of emergency provisions and therefore need to be attended.

The categories of occupants for which this exemption is sought are qualified aeronautical personnel. Furthermore, they are trained in the autonomous use of emergency equipment and emergency exit operation. The operator will also be required to allow access to these seats only to persons found able to perform these tasks on their own. Therefore, the assist space adjacent to the emergency exits required by Section 25.813(b) for assisting the passengers in evacuating is not necessary, because the categories of personnel considered will be trained for door operation and autonomous evacuation. Both doors are equipped with self-deploying slides.

Similarly, the requirements of Sections 25.1447(c)(1) and (c)(3)(ii) to have automatic presentation of oxygen dispensing units before the cabin pressure altitude exceeds 15,000 ft. are compensated for by the users' knowledge of equipment location and use. The masks provided are quick-donning masks with a regulator, and are immediately available to seated occupants. A similar procedure for reach and use of dispensing units applies to flight crewmembers.

As far as the excess 10 percent dispensing units also required by Section 25.1447(c)(1) are concerned, they are mainly required for two purposes: use by cabin attendants moving along the aisles, and passengers' awkwardness in reaching one mask. Neither of these factors applies to the considered configuration.

The requirements of Section 25.785(d) to have handgrips installed when seatbacks do not allow a firm handhold could not be met because the six rear-facing seats are affixed to vertical partitions (stowage on the righthand side, lavatory wall on the lefthand side). Such grips are mainly intended for the use of cabin attendants who need to frequently walk along the aisles. For the categories of occupants considered, the recommendation to remain seated with seat belt fastened, as far as practicable, will be made in order to limit moving around to the necessary minimum.

Public Interest

Airbus presents the argument that the granting of this exemption will be in the public interest by allowing US airlines to compete with other freighter operators with such a configuration. If allowed to carry supernumerary persons aboard their cargo flights, the U.S. operators of the Airbus A300C4-605R Variant F airplanes will be able to operate under optimal safety conditions, to render their operation more efficient, and to realize substantial savings in carrying their personnel from one place to another. The reasons for these benefits are developed in the arguments above.

Request for Waiver of Publication

No new design feature is introduced and the reasons presented for exemption are identical to those for which an exemption has been previously granted for the A300F4-605R [see Exemption Number 5864]. Therefore this request will not set a precedent and, considering the imminent date of certification – June 21, 2002, Airbus requests a waiver for the publication and comment period, so that the airplane can rapidly enter into service with the essential capacity of carrying supernumerary persons. Airbus notes that this request for waiver was accepted at the time of the A300F4-605R exemption.

Airbus believes that good cause exists to waive the publication and comment requirements of §§ 11.85, 11.87, and 11.89. In particular, they feel that the main purpose of this petition and the reasons presented in it are identical to those for exemptions previously granted by the FAA.

Waiver of Notice and public procedure:

The FAA finds that good cause exists why action on this petition should not be delayed by publication and comment procedures for the following reasons:

1. The granting of this petition would not set a precedent in this matter. The provision for carriage of supernumerary individuals on a freighter airplane has been allowed on several other models.
2. The relief requested from specific regulations is identical to exemptions granted previously.
3. Delay in acting on the petition may have an adverse effect on Airbus and US operators who are scheduled to introduce the airplane into service.
4. Because there were no new design features, there was some confusion about the need for an exemption, which resulted in a delay of filing the petition in a timely manner.

The FAA's analysis/summary is as follows:

The petitioner has requested relief primarily from the requirements of § 25.857(e), which permit carriage of cargo only when a class E cargo compartment is installed on the airplane. Class E cargo compartments are usually remote from the flight deck and encompass the entire interior of the airplane. The means of controlling fires that might occur in the cargo compartment is to starve the fire of oxygen. This is accomplished by

depressurizing the airplane and maintaining an altitude that will not support combustion. For this reason, only crewmembers are permitted on board such airplanes.

As noted by the petitioner, the FAA has previously granted exemptions for carriage of persons in addition to crew on freighter airplanes, provided certain conditions are met. These conditions have varied, depending on the airplane design and the number of persons involved.

In all cases, there must be suitable means of preventing smoke penetration into areas that are occupied. In addition, due to the nature of the means of fire control, it is necessary to limit persons on board the airplane to those who have been found by the operator to be physically fit and who have been briefed on the use of emergency equipment. The Airbus design accounts for these considerations by providing a smoke curtain and by proposing limitations on the occupants. These are consistent with previous approvals.

For the A300C4-605R Variant F, a major positive feature of the design is the retention of the passenger doors. These doors have the dimensions (42" X 72") of type A exits, and incorporate inflatable escape slides to facilitate exiting. For a passenger airplane with the same number of occupants, the regulations only require a pair of Type III exits, which are 20" X 36" in size. Even though the interior arrangement of this airplane does not provide all of the required access to classify the exits as type A, they are far superior to a minimum type III exit. The FAA considers that an assist space is not necessary in this case due to the higher level of training and awareness of the occupants.

The requirement for a handhold to enable passengers or flight attendants to steady themselves while using aisles in moderately rough air is geared toward airplanes that may have fairly long distances between seats and the areas of the cabin where persons may be during flight. On the A300C4-605R Variant F, the occupied area is very small, and it is possible to return to each seat very quickly. In addition, the occupants would be seated for the majority of the flight, as noted by the petitioner. Therefore the FAA concurs that a handhold is not necessary.

The FAA considers that the supernumeraries should have an oxygen system that is comparable to that of passengers. However, taking into account the extra knowledge and training that these people will have, it is not necessary that an equivalent system be installed. In this case, the masks are installed in a readily accessible location that is visible to the occupants, and are of the quick-donning variety. A single motion removes the mask from its stowage, which is directly comparable to passenger oxygen. Notification that oxygen is necessary is by visual and aural signal, as opposed to automatic presentation of the masks. Since the occupants will be briefed on the location of the masks and the signals for their use, this difference is considered acceptable. As noted by the petitioner, § 25.1447(c)(1) at Amendment 25-41 requires that there be ten percent more masks than occupants, and § 25.1447(c)(3)(ii) at Amendment 25-41 requires that there be two masks in each lavatory. The FAA concurs that the rationale behind these requirements does not apply in this case, and therefore an exemption is warranted.

In conclusion, the FAA has determined that the existing regulations for type certification do not address occupants that are neither crew nor passengers, and an exemption is warranted to permit carriage of these supernumerary individuals.

The Model A300C4-605R Variant F airplane is a derivative of the Model A300F4-605R airplane, and similar to other models listed on the U.S. Type Certificate A35EU. The FAA certification basis for the Model A300C4-605R Variant F airplane is the U.S. Type Certificate A35EU, first issued on May 30, 1974, and later amended to include the Model A300F4-605R airplane. Therefore, the FAA certified Model A300C4-605R Variant F airplane must comply with those regulations used for the original certification, which includes granting an exemption from the same regulations, at the specified amendment levels.

In consideration of the foregoing, I find that a grant of exemption is in the public interest and will not affect the level of safety provided by the regulations. Therefore, pursuant to the authority contained in 49 U.S.C. 40113 and 44701, delegated to me by the Administrator, Airbus is hereby granted an exemption from 14 CFR 25.785(d), 25.813(b), and 25.857(e) at Amendment 25-32, and 25.1447(c) at Amendment 25-41 of the Federal Aviation Regulations. The petition is granted to the extent required to permit type certification of the Airbus Model A300C4-605R Variant F series airplanes, with provisions for the carriage of supernumeraries when the airplane is equipped with two floor level exits with escape slides, within the occupied area. The following limitations apply:

1. The airplane flight manual (AFM) must contain a limitation that occupancy is restricted to six persons outside of the flight deck.

2. Occupants are limited to the categories specified in § 121.583(a)(1) through (7).

3. Each occupant must be briefed by a flight crewmember on the use of the exits and emergency equipment prior to each flight.

4. The operator must determine that each occupant is physically able to accomplish the necessary emergency procedures.

This exemption will remain in effect unless superseded or rescinded.

Issued in Renton, Washington on June 6, 2002.

/s/Ali Bahrami
Ali Bahrami
Acting Manager
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Aircraft Certification Service, ANM-100